CLAIMS

1. A projectile comprising:

a substantially rigid body portion;

at least one deployable member that is in a retracted position within the body portion when the projectile is fired; and

a nose piece coupled to a front of the body portion, wherein the nose piece includes at least one shear member that is sheared off when the nose piece contacts a target, thereby causing the nose piece to move inside of the body portion, thereby moving the at least one deployable member to a deployed position.

2. The projectile of claim 1 wherein the body portion comprises bronze.

3. The projectile of claim 1 wherein the nose piece comprises plastic.

4. The projectile of claim 1 wherein the at least one deployable member comprises hardened steel.

5. The projectile of claim 1 wherein the at least one deployable member comprises a plurality of knife members, each knife member having a sharp edge that is outside of the body portion when in the deployed position.

6. The projectile of claim 1 wherein the nose piece is friction-fit into an axial cylindrical hole in the body portion.

7. The projectile of claim 1 wherein the at least one shear member comprises an annular ring portion of the nose piece that is larger in diameter than the cylindrical hole.

8. The projectile of claim 1 wherein the body portion comprises a portion of full diameter, and a portion of reduced diameter for receiving a sabot.

9. A projectile comprising:

a substantially rigid body portion, the body portion including an axial cylindrical hole at a front of the body portion, the body portion further including first and second slots on opposite sides of the body portion that extend from the axial cylindrical hole through the body portion;

a first deployable knife member that includes a first cutting edge that is in a retracted position inside the first slot when the projectile is fired;

a second deployable knife member that includes a second cutting edge that is in a retracted position inside the second slot when the projectile is fired; and

a nose piece friction-fit into the axial cylindrical hole at the front of the body portion, wherein the nose piece includes at least one shear member that is sheared off when the nose piece contacts a target, thereby causing the nose piece to move inside of the body portion, thereby moving the first deployable knife member in a deployed position with the first cutting edge extending outside the first slot, and thereby moving the second deployable knife member in a deployed position with the second cutting edge extending outside the second slot.

10. The projectile of claim 9 further comprising a cylindrical groove near the bottom of the axial cylindrical hole, wherein a first tab portion of the first deployable knife member extends into the cylindrical groove when the first deployable knife member is in the deployed position, and wherein a second tab portion of the second deployable knife member extends into the cylindrical groove when the second deployable knife member is in the deployed position.

11. The projectile of claim 9 wherein the first deployable knife member comprises a first raised member that has a height that makes a thickness of the first deployable knife member greater than a thickness of the first slot in the body portion, thereby retaining the first deployable knife member within the body portion until the nose piece forces the first raised member into the first slot when the first deployable knife member is moved into the deployed position when the projectile contacts the target.

12. The projectile of claim 11 wherein the first deployable knife member comprises a second raised member that has a height substantially greater than the first raised member, the second raised member holding a portion of the first deployable knife member inside the body portion when the first deployable knife member is in the deployed position outside of the first slot.

13. The projectile of claim 9 wherein the body portion comprises a portion of full diameter, and a portion of reduced diameter for receiving a sabot.

14. A projectile comprising:

a substantially rigid body portion, the body portion including an axial cylindrical hole at a front of the body portion, the axial cylindrical hole having a cylindrical groove near the bottom of the axial cylindrical hole, the body portion further including first and second slots on opposite sides of the body portion that are offset from each other by the width of one of the first and second slots;

a nose piece friction-fit into the axial cylindrical hole at the front of the body portion, wherein the nose piece includes at least one shear member that is sheared off when the nose piece contacts a target, thereby causing the nose piece to move inside of the body portion;

a first deployable knife member that includes a first cutting edge that is in a retracted position inside the first slot when the projectile is fired, wherein the first deployable knife member comprises a first raised member that has a height that makes a thickness of the first deployable knife member greater than a thickness of the first slot in the body portion, thereby retaining the first deployable knife member within the body portion until the projectile contacts a target, wherein the first deployable knife member comprises a second raised member that has a height substantially greater than the first raised member, the second raised member holding a portion of the first deployable knife member inside the body portion when the first deployable knife member is in the deployed position with the first cutting edge outside of the first slot, wherein a first tab portion of the first deployable knife member extends into the cylindrical groove when the first deployable knife member is in the deployed position, wherein movement of the nose piece inside the body portion causes the nose piece to push the first deployable knife member to the deployed position;

a second deployable knife member that includes a second cutting edge that is in a retracted position inside the second slot when the projectile is fired, wherein the second deployable knife member comprises a first raised member that has a height that makes a

(claim 14 continued)

thickness of the second deployable knife member greater than a thickness of the second slot in the body portion, thereby retaining the second deployable knife member within the body portion until the projectile contacts a target, wherein the second deployable knife member comprises a second raised member that has a height substantially greater than the first raised member, the second raised member holding a portion of the second deployable knife member inside the body portion when the second deployable knife member is in the deployed position with the second cutting edge outside of the second slot, wherein a second tab portion of the second deployable knife member extends into the cylindrical groove when the second deployable knife member is in the deployed position, wherein movement of the nose piece inside the body portion causes the nose piece to push the second deployable knife member to the deployed position.

15. The projectile of claim 14 wherein the axial cylindrical hole in the body portion includes a v-shaped bottom, and wherein the first and second deployable knife members each comprise a v-shaped portion that lies in the v-shaped bottom when the first and second deployable knife members are in their deployed positions.

16. The projectile of claim 14 wherein the body portion comprises a portion of full diameter, and a portion of reduced diameter for receiving a sabot.

17. A method for manufacturing a projectile, the method comprising the steps of:

forming an axial cylindrical hole at a front of a body portion;

forming first and second slots on opposite sides of the body portion, the first and second slots being offset from each other by a thickness of one of the first and second slots;

placing a first deployable knife member through the axial cylindrical hole into the first slot;

placing a second deployable knife member through the axial cylindrical hole into the second slot; and

placing a nose piece into the axial cylindrical hole of the body portion.

18. The method of claim 17 further comprising the step of forming a cylindrical groove near the bottom of the axial cylindrical hole.

19. The method of claim 17 wherein the body portion comprises bronze.

20. The method of claim 17 wherein the nose piece comprises plastic.

21. The method of claim 17 wherein the first and second deployable knives comprise hardened steel.

22. A method for expanding the size of a projectile upon contact with a target, the method comprising the steps of:

(A) firing the projectile at the target, the projectile comprising:

a substantially rigid body portion;

at least one deployable member that is in a retracted position within the body portion when the projectile is fired; and

a nose piece coupled to a front of the body portion;

(B) upon contacting the target, the force of the impact of the projectile on the target shearing off a portion of the nose piece to move the nose piece within the body portion, the movement of the nose piece within the body portion deploying the at least one deployable member to a deployed position.

23. The method of claim 22 wherein the deployment of the at least one deployable member causes the at least one deployable member to lock into place in the deployed position.

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